

FISHES FROM PRINCESS CHARLOTTE BAY, NORTH QUEENSLAND

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Fig. 1-11.

THE fishes listed in this paper were collected by Messrs. Herbert M. Hale and Norman B. Tindale, of the South Australian Museum, during an expedition to northern Queensland in 1927. Details of their field work have been given in their account of the aborigines, (1) to which reference may be made for maps and geographical data. The fishes belong to coastal Queensland forms and are thus Banksian (2) in facies, being quite distinct from the Solanderian or purely coral reef forms. At some places, such as Low Isles, the former headquarters of the British Great Barrier Reef Expedition, both the Banksian and Solanderian forms have been found, though each is restricted to its special habitat. From Bathurst Head, the collectors obtained a number of small fishes, labelled "Telkara". Thirty-two of these are *Ambassis*, two are *Terapon puta*, and one is a damaged *Mugil*. A small Toadfish in the same batch is *Chelonodon patoca*, and a larger Toadfish, called "Adadi", is *Ovoides manillensis virgatus*.

The majority of the collection was made inshore at Flinders Island, where by far the commonest fish was *Bathygobius fuscus darntleyensis*.

A feature of the collection is the series of *Centrogenys* and *Sebastapistes*, showing the former, a Percoid fish, mimicking the latter, a Scorpaenoid, in form and coloration.

The specimens are preserved in the South Australian Museum, Adelaide. The opportunity is taken to present the results of some detailed researches into the status of some species of Chandidae, in connection with the discovery of a new species of *Ambassis* by Messrs. Hale and Tindale.

FAMILY MURAENIDAE.

Gymnothorax Bloch, 1795.

Gymnothorax melanospilus (Bleeker).

Muraena melanospila Bleeker, Nat. Tydschr. Ned. Ind., ix, 1855, p. 279, Sibogha, Sumatra.

(1) Hale and Tindale, Rec. S. Austr. Mus., v, 1933, p. 63.

(2) Whitley, Austr. Nat., viii, Dec. 1932, p. 166.

One specimen 154 mm. long from Flinders Island has light margins to the dorsal and anal fins and measures 70 mm. from snout to vent.

FAMILY MUGILIDAE.

MUGIL Linné, 1758.

MUGIL, sp.

A small mullet, 52 mm. in standard length, from Bathurst Head, and another of 42 mm. from Flinders Island, are too small or too damaged for precise identification. D. iv/9; A. ii/9 or 10. Sc. 36. L. tr. 13. No adipose eyelids. Upper teeth very deep but not crenulate. Extremity of maxillary visible. No teeth. Angle of preorbital strongly denticulated. Soft dorsal and anal fins with scaly sheaths.

These specimens approach *M. ramsayi* Macleay and *M. converus* De Vis, but do not agree exactly with either.

ELLOCHELON Whitley, 1930.

ELLOCHELON VAIGIENSIS (Quoy and Gaimard).

Mugil vaigiensis Quoy and Gaimard, Voy. Uranie Physic., Zool., 1825, p. 337, pl. lix, fig. 2, Waigiou.

Two very small specimens, 21 mm. in standard length, from Flinders Island.

FAMILY EPINEPHELIDAE.

CENTROGENYS Richardson, 1842.

CENTROGENYS VAIGIENSIS (Quoy and Gaimard).

Fig. 1.

Scorpaena vaigiensis Quoy and Gaimard, Voy. Uran. Physic., Zool., Dec. 18, 1824, p. 324, pl. lviii, fig. 1, Waigiou.

Centropristes scorpenoides Cuvier and Valenciennes, Hist. Nat. Poiss. iii, April, 1829, p. 48. New name for *Scorpaena vaigiensis* Quoy and Gaimard, Waigiou.

Myriodon waigiensis Brisout de Barneville, Rev. Zool. Soc. Cuv., x, April, 1847, p. 133. Based on *Scorpaena vaigiensis* Quoy and Gaimard, Waigiou.

Sebastes stoliczkae Day, Fish. India i, Aug., 1875; p. 148, pl. xxxvi, fig. 1, Nicobars.

Gemmadius stoliczkae Jordan and Seale, Bull. U.S. Bur. Fish. xxvi, 1906 (1907), p. 37 *Ex* Day.

Rhabdoscabastes stoliczkae Fowler and Bean, Proc. U.S. Nat. Mus. lxii, 2, July 28, 1922, p. 60 (Philippines).

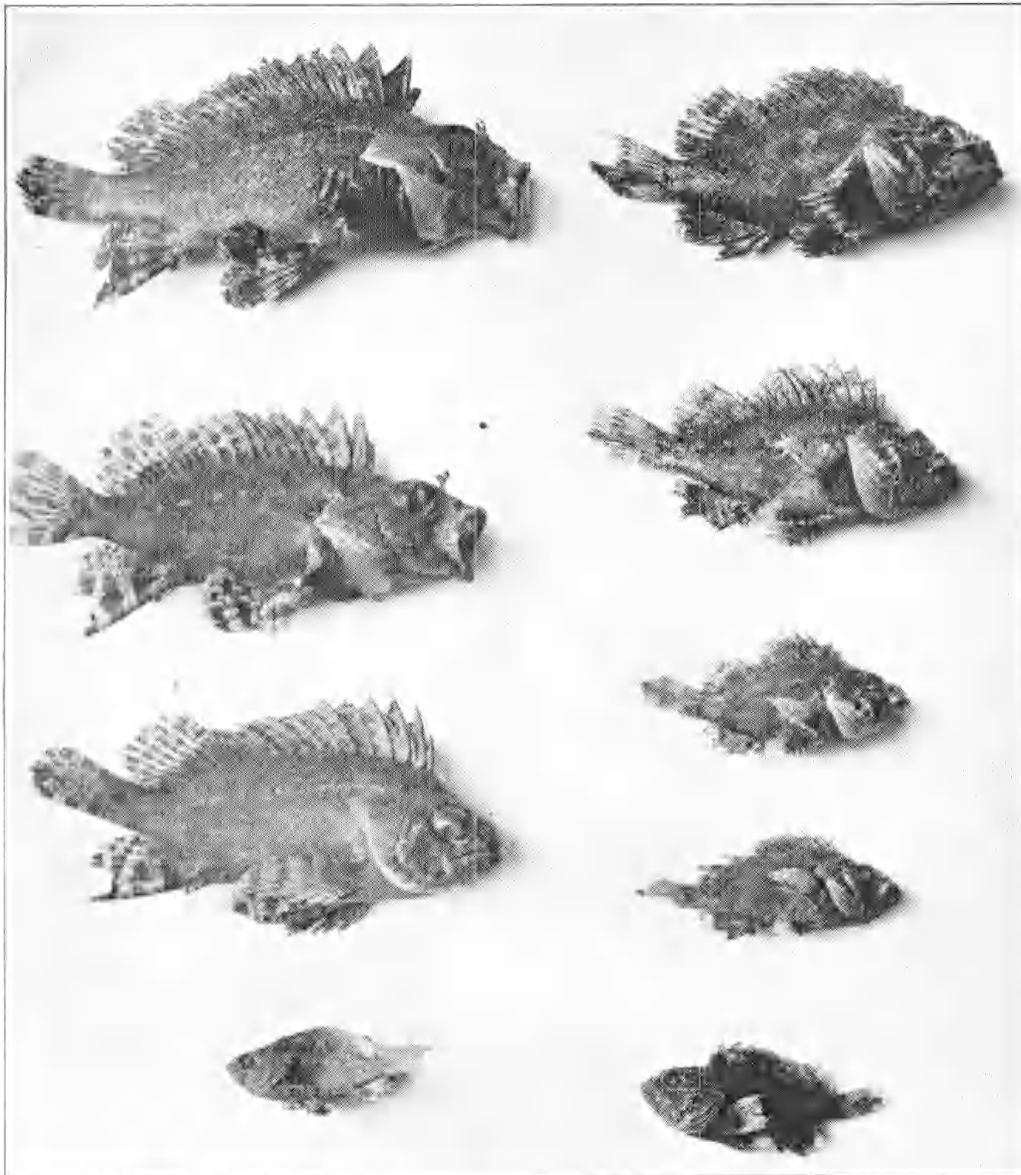


Fig. 1. Four specimens (left) of the Percoid fish *Centropygeus vaigiensis* (Quoy & Gaimard) showing the superficial resemblance to the Scorpaenoid fish *Sebastapistes bynoensis laotale* Jordan and Seale. (Photo, G. C. Clutton).

Four specimens, 26-66 mm. in standard length from Flinders Island.

This species may perhaps be termed the *pons asinorum* of ichthyology as, derived from a Percoid stock, it has evolved a striking superficial resemblance to the Scorpaenoid fishes and has several times been redescribed as a new genus of Scorpaenidae, notwithstanding its lack of the characteristic posterior projection

from the suborbital bones extending across the cheek to the preoperculum. The Scorpaenoid or Scorpion fishes are sluggish creatures with venomous spines on the head or in the dorsal fin, so that the harmless *Centrogenys* may derive some fortuitous benefit from resembling them, and the accompanying photographs of specimens of the Scorpaenoid *Sebastapistes*, collected by Messrs. Hale and Tindale at the same place as the *Centrogenys*, emphasize their similarities and differences in a manner which does not seem to have been previously presented.

A certain amount of mimicry, or at least a remarkable convergence in facies, appears to be noticeable in several fishes of the coral seas. My Eleotrid genus *Gignimentum* is strangely like a Trichonotid. The goby *Obtortiophagus* rather recalls the more ornate Eleotridae like *Amblygobius*. Several dredged forms resemble small stones or rocks and thereby appear similar to one another; thus, the quaint Angler Fish, *Tetrabrachium*, which I have recently recorded from Hayman Island, at first appeared to me like a small *Erosa*, a relative of the Stonefish.

Here is an interesting subject for future elaboration, yet one in which conclusions must be arrived at with caution.

Probably subspecies or races of *C. vaigiensis* will be later distinguished; Fowler and Bean, for instance, noticed that the Philippine form was not typical "*stoliczkae*".

FAMILY TERAPONTIDAE.

TERAPON Cuvier, 1816.

TERAPON PUTA Cuv. and Val.

Therapon puta Cuvier and Valenciennes, Hist. Nat. Poiss. iii, April, 1829, p. 131. Pondicherry, etc., India.

Terapon puta Fowler, Bull. U.S. Nat. Mus., 100, xi, 1931, p. 328 (references and synonymy).

Two small specimens, 22-25 mm. in standard length, from Bathurst Head, amongst "Telkara" (*Ambassis*).

FAMILY APOGONIDAE.

FOA Jordan and Evermann, 1905.

FOA FO Jordan and Seale.

Foa fo Jordan and Seale, Bull. U.S. Bur. Fish. xxv, 1905 (Dec. 15, 1906), p. 248, fig. 42, Apia, Samoa.

Six specimens, 17-31 mm. in standard length, from Flinders Island. Three (LA. 6047) retained for Australian Museum.

New record for Australia.

FAMILY CHANDIDAE.

AMBASSIS Cuvier and Valenciennes, 1828.

AMBASSIS TELKARA sp. nov.

Fig. 2.

D. vii/i, 9, A. iii. 9; L. lat. 27-28; L. tr. 3/1/7-8.

Eye (5 mm.) 3 in head (15). Depth of body (17) 2.6 in standard length (45). Second dorsal spine (11 mm.) 4.1 in same.

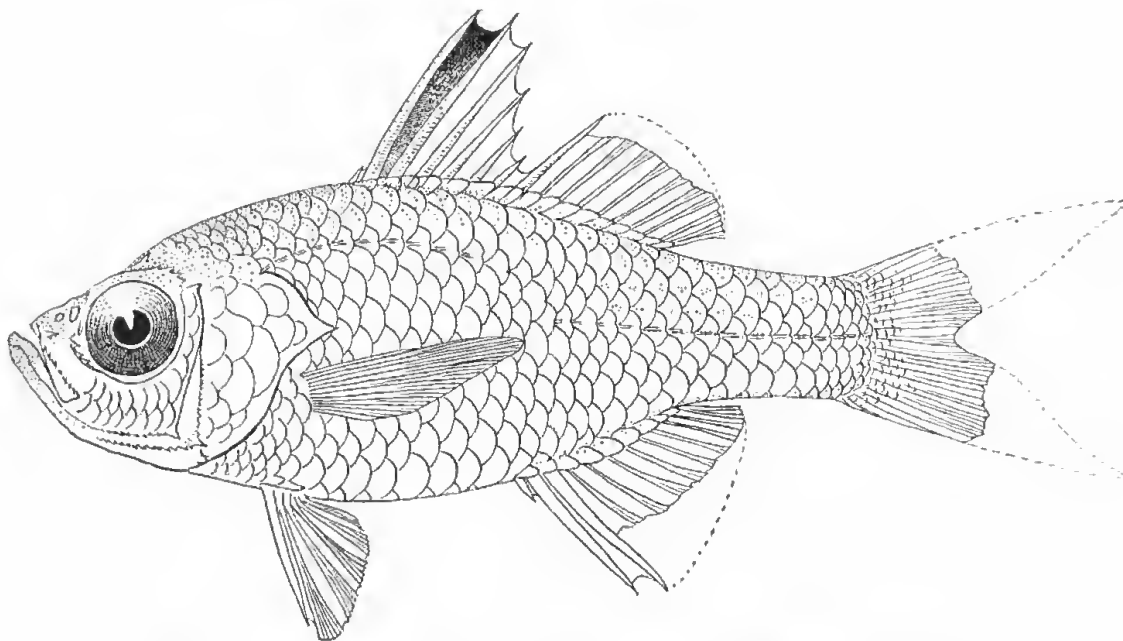


Fig. 2. *Ambassis telkara* sp. nov., holotype, $\times 2$ (G. P. Whitley, del.).

Head longer than high. Spiny serrations on supraorbital, preorbital lower margins of preoperculum, and on each side of nape. Two rows of scales on cheek. Lower jaw longer than upper. Bands of regular villiform teeth on jaws and vomer. Tongue toothless. Maxillary reaching anterior fourth of eye, slightly dilated and with an obliquely truncate and slightly excavate posterior margin. Mandibular ramus sloping upward. Twenty or more gillrakers on lower half of first gillarch. Body fairly deep, compressed, scaly. Lateral line practically continuous, the tubes merely becoming weak where the curved portion approaches the straight. About fourteen predorsal scales. Procumbent dorsal spine concealed. Membrane between second and third dorsal spines blackish. Second anal spine strong but not as long as the third. Pectorals nearly as long as head with-

out snout. General colour in alcohol, straw yellowish, with dusky marks along top of back and punctulations on edges of superior scales. Caudal plain.

This species runs down to *Ambassis nalu* in Weber and Beaufort's key (Fish Indo-Austr. Archip. v, 1929, p. 389) but Hamilton-Buchanan's original figure of *Chanda nalu* shows a different fish with much deeper cheek, 11 dorsal rays, 10 anal rays, and depth of body half the standard length. The Australian species of this genus badly need revision, but the present one does not agree with any published description, and is accordingly described as new from the largest of a series of thirty-two somewhat damaged specimens, 26-45 mm. in standard length. At the end of this paper, I append some remarks on various genera and species of Chandidae which I have compared with this new form.

Six (TA. 6046) retained for Australian Museum.

Loc. Bathurst Head, North Queensland.

Native Name, *Telkara*.

FAMILY SPARISOMIDAE.

SCARICHTHYS Bleeker, 1859.

SCARICHTHYS AURITUS (Cuv. & Val.).

Scarus auritus Cuvier and Valenciennes, Hist. Nat. Poiss. xiv, "1839"=Jan. 1840, p. 218, *Ex* Kuhl and Van Hasselt MS. Java.

A young specimen, 33 mm. in standard length, from Flinders Island, is apparently referable to this species.

FAMILY LABRIDAE.

CHOERODON Bleeker, 1845.

CHOERODON SCHOENLEINI (Cuv. and Val.).

Cossyphus schoenleinii Cuvier and Valenciennes, Hist. Nat. Poiss. xiii, 1839, p. 143, *Ex* Agassiz MS. Celebes.

Choerops schoenleini Bleeker, Atlas Ichth. i, 1862, p. 163, pl. xlvi, fig. 3.

Chacrops nolatus Alleyne & Macleay, Proc. Linn. Soc. N.S. Wales i, March, 1877, p. 344, pl. xvi, fig. 1. Cape Grenville, Queensland.

One specimen, nearly 110 mm. in standard length, from Flinders Island agrees well with Bleeker's figure and has cheeks scaly and pitted; preoperculum denticulate; lower opercular margin excavate; and five predorsal scales. The type of Alleyne and Macleay's species I have examined in the Macleay Museum, University of Sydney, and find it conspecific with *schoenleinii*.

FAMILY BLENNIIDAE.

Subfamily Petrosirtinae.

PAULOSCIRTES gen. nov.

Orthotype, *Petrosirtes obliquus* Garman, Queensland specimens.

No crest or tentacles on the head, which is about a quarter to one-fifth of the standard length. Snout blunt. A curved row of about thirty compressed incisors in each jaw. Canines of upper jaw well curved and lying outside the larger canines of the lower jaw. Gill-opening reduced to a small aperture lying above the level of the pectoral fins.

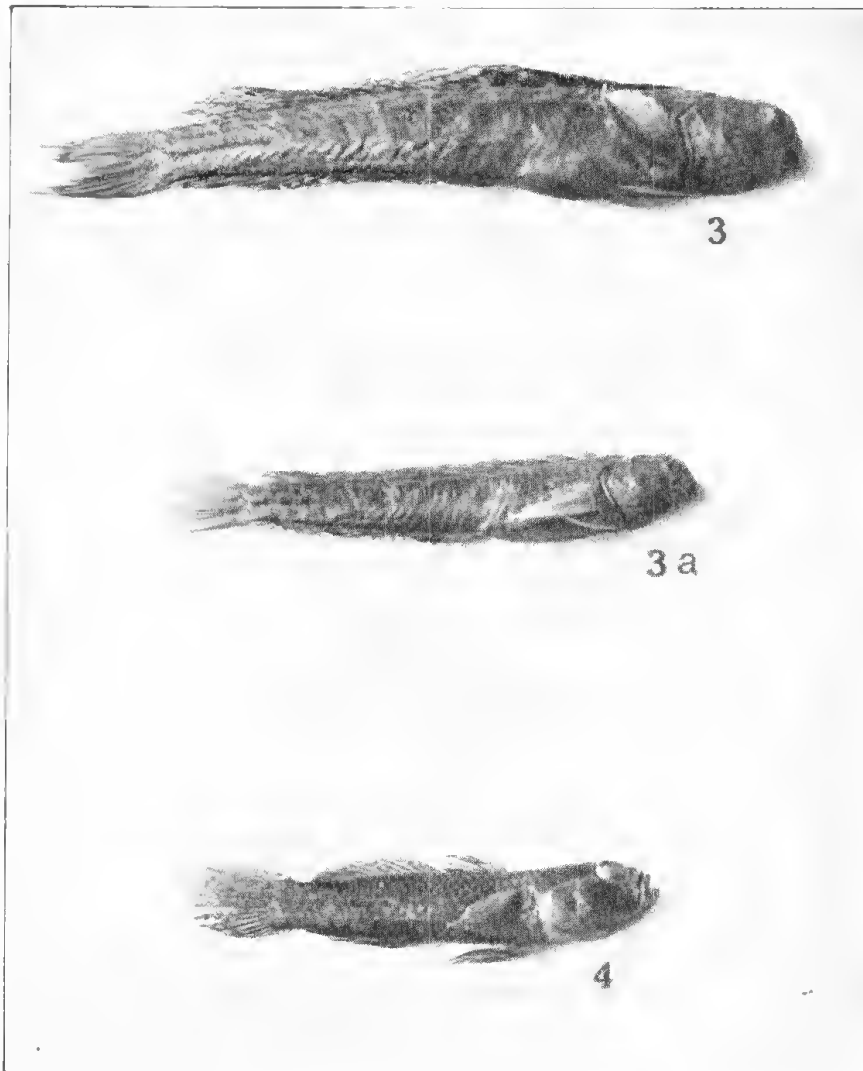


Fig. 3 3a. *Pauloscirtes obliquus* Garman. Fig. 4. *Drombus halei* sp. nov. (Photo, G. C. Clutton).

Body naked, its depth about one-sixth of the standard length. Lateral line reduced to a few pores near the shoulder.

Dorsal fins united, no differentiated anterior portion or produced dorsal rays. More than thirty dorsal rays and less than thirty anal rays. Both of these fins distinct from the caudal. Some of the caudal rays may be produced in large specimens.

Coloration ornate on head, body, and dorsal and anal fins.

At once separable from *Petroscirtes* Rüppell, 1830, by its longer habit, lack of tentacles on head, and lower dorsal fin. *Blemnechis* Cuv. & Val, 1836 has the anterior dorsal rays produced and a broad lateral band. *Omobranchus*, of the same authors, has small canines and dorsal fin joined to caudal. *Aspidontus* Quoy and Gaimard, 1835, is conspicuously banded and has the snout pointed. *Graviceps* Fowler, 1903, has only eighteen incisors in each jaw and less elongate form but is closer to the new form than the other genera mentioned. *Cyngichthys* Ogilby, 1910, has an elevated crest on the occiput and some of the dorsal rays filamentous, whilst *Ostreoblennius* Whitley, 1930, differs in having the head less than four in standard length and in its coloration.

PAULOSCIRTES OBLIQUUS (Garman).

Fig. 3-3a.

Petroscirtes obliquus Garman, Bull. Mus. Comp. Zool. Harvard, xxxix, 8, August, 1903, p. 237, pl. iv, fig. 3. Suva, Fiji Is.

Two specimens, 36-52 mm. in standard length, from Flinders Island.

FAMILY GOBIIDAE.

BATHYGOBIUS Bleeker, 1878.

BATHYGOBIUS FUSCUS DARNLEYENSIS (Alleyne and Macleay).

Gobius darnleyensis Alleyne and Macleay, Proc. Linn. Soc. N.S. Wales i, March, 1877, p. 331, pl. xii, fig. 1. Darnley Island, Queensland.

Bathygobius fuscus darnleyensis Whitley, Gl. Barrier Reef Exped. Sci. Rept. iv, 9, Feb. 27, 1932, p. 302.

A series of 24 specimens, 11 to 46 mm. in standard length, from Flinders Island. The largest specimen has lost its left eye, and the empty socket is covered by a skin similar to that of the rest of the head; it appears to be a male.

YONGEICHTHYS Whitley, 1932.

YONGEICHTHYS CRINIGER (Cuv. & Val.).

Gobius criniger Cuvier and Valenciennes, Hist. Nat. Poiss. xii, March, 1837, p. 82. Port Dorey, New Guinea.

Yongeichthys criniger Whitley, Gt. Barrier Reef Exped. Sci. Rept. iv, 9, Feb. 27, 1932, p. 303.

Two young specimens, 22-23 mm. in standard length, from Flinders Island.

ISTIGOBIUS Whitley, 1932.

ISTIGOBIUS STEPHENSONI (Whitley).

Gobius (Istigobius) stephensoni Whitley, Gt. Barrier Reef Exped. Sci. Rept. iv, 9, Feb. 27, 1932, p. 301. Murray Island, Queensland.

Three young specimens, 13.5-23 mm. in standard length, from Flinders Island.

AMBLYGOBIUS Bleeker, 1874.

AMBLYGOBIUS PHALAENA (Cuv. & Val.).

Gobius phalaena Cuvier and Valenciennes, Hist. Nat. Poiss. xii, March, 1837, p. 92. Vanikolo, Santa Cruz Group.

Amblygobius phalaena McCulloch and Ogilby, Rec. Austr. Mus. xii, 10, July 11, 1919, p. 253, pl. xxxv, fig. 1.

Two young specimens, 26-31 mm. in standard length, from Flinders Island.

DROMBUS Jordan and Seale, 1905.

Drombus Jordan and Seale, Proc. U.S. Nat. Mus. xxviii, 1905, p. 797. Orthotype, *D. paluckyi* Jordan and Seale.

The typical form of this genus from the Philippine Islands is recalled by the Queensland goby which I name below:

DROMBUS HALEI sp. nov.

Fig. 4-5.

D. vi/11; A. i/8; P. 18; V. 5; about 20 caudal rays. Sc. 28. L. tr. 11. Predorsal scales 19.

Head (10 mm.), 3, depth (6) 5 in standard length. Eye (nearly 3 mm.), 3.3 in head.

Head naked; the cheeks crossed by minute cirriform papillae in rows. No pit, only a shallow groove, over opercles. No crests or barbels. Preoperculum unarmed. Nape and neck scaly. Snout short and obtuse; mouth small, the maxillary reaching to below anterior margin of eye. Lower jaw protruding beyond upper. Bands of simple villiform teeth, with a few enlarged outer ones, on jaws. Behind these, a buccal flap in each jaw. Vomer toothless. Interorbital a very narrow dip between the tumid ocular margins. Gill openings wider than pectoral base, separated by a broad isthmus.

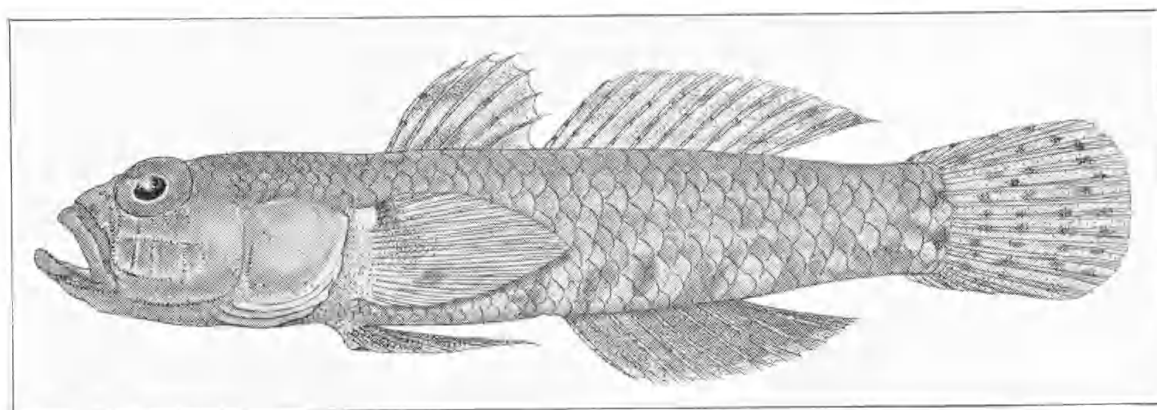


Fig. 5. *Drombus halei* sp. nov., holotype, $\times 3$ (G. P. Whitley, del.).

Size small. Body covered with large etenoid scales, which extend over the nape and neck to the eyes. Breast and lower part of pectoral base naked.

First dorsal with six spines, none of them stiff or filamentous. Upper pectoral rays not free nor differentiated from the others. Ventrals five-rayed, united, and with a rather deep frenum. Caudal rounded.

Colour in spirits, dark brownish, especially on head and back. Lower part of body lighter brown, crossed by eight or nine obscure darker areas which tend to form chequers with a similar row above them and alternating with them. Eye bluish. Fins white, more or less densely spotted or infuscated with brown or blackish. A yellow spot, followed by a dark smoky wash on bases of upper pectoral rays.

Described and figured from the unique holotype of the species, a specimen 30 mm. in standard length or $1\frac{1}{2}$ inches in total length.

Loc. Flinders Island, North Queensland; caught inshore.

Named in honour of Mr. Herbert M. Hale, Director of the Museum at Adelaide.

FAMILY PERIOPHTHALMIDAE.

EUCHORISTOPUS Gill, 1863.

EUCHORISTOPUS KALOLO (Lesson).

Periophthalmus kalolo Lesson, Voy. Coquille, Zool. ii, 1, 1831, p. 146. Waigiou.
Periophthalmus argentilincatus Cuv. & Val., Hist. Nat. Poiss. xii, March, 1837, p.
 191. Waigiou, etc.; same specimens, collected by Lesson and Garnet.

Euchoristopus kalolo Whitley, Austr. Zool. vi, Feb. 13, 1931, p. 325. *Id.* Hale and
 Tindale, Rec. S. Austr. Mus. v, 1933, p. 110.

Two specimens, 60-65 mm. standard length, from Flinders Island.

FAMILY SCORPAENIDAE.

SEBASTAPISTES Streets, 1877.

SEBASTAPISTES BYNOENSIS LAOTALE Jordan & Seale.

Fig. 1.

Sebastapistes laotale Jordan and Seale, Bull. U.S. Bur. Fish. xxv, 1905 (Dec. 15,
 1906), p. 376, fig. 72. Apia, Samoa.

Five specimens, 32-53 mm. in standard length (on right in fig. 1), from
 Flinders Island are figured beside a series of *Centrogenys* from the same place
 to show the remarkable superficial resemblance between the two structurally dif-
 ferent species.

FAMILY PLATYCEPHALIDAE.

SUGGRUNDUS Whitley, 1930.

SUGGRUNDUS NEMATOPHTHALMUS (Gunther).

Platycephalus nematophthalmus Gunther, Cat. Fish. Brit. Mus. ii, 1860, p. 184.
 Port Essington, North Australia.

One small specimen, 70 mm. in standard length, from Flinders Island.

FAMILY TETRAODONTIDAE.

OVOIDES Anonymous, 1798.

OVOIDES MANILLENSIS VIRGATUS (Richardson).

Tetrodon manillensis Procé, Bull. Soc. Philom. Paris, Sept. 1822, p. 130. Manilla,
 Philippine Islands.

Tetrodon virgatus Richardson, Zool. Voy. Erebus and Terror, Fish, 1846, p. 62, pl. xxxix, fig. 8-9. Port Jackson, *Id.* Richardson, Zool. Voy. Herald, Verteb. 1854, p. 163, pl. xxviii (Port Jackson and Torres Strait).

One specimen, 147 mm. in standard length, from Bathurst Head, is accompanied by a label, giving the native name as "Adadi", and stating that this fish is *boiled*, being poisonous if roasted in embers in the usual way fish are cooked.

CHELONODON Müller, 1841.

CHELONODON PATOCA (Hamilton-Buchanan).

Tetrodon patoca Hamilton-Buchanan, Fishes of the Ganges, 1822, pp. 7 and 363, pl. xviii, fig. 2. Ganges, India.

Leiodon patoca, Bleeker, Atlas Ichth. v, 1865, p. 76, pl. cex, fig. 2.

A specimen, 97 mm. in standard length, from Flinders Island, and another, of 44 mm. from Bathurst Head. The fins are orange or yellowish, the caudal being transversed by a diffuse dusky band.

New record for Queensland.

The Australian Museum also possesses a specimen from the Trobriand Islands.

REMARKS ON SOME TYPICAL SPECIMENS OF CHANDIDAE, EXAMINED FOR COMPARISON WITH *AMBASSIS TELKARA* Whitley (3).

Thanks to the loan of type-specimens by the Queensland Museum, Brisbane, and the Macleay Museum, University of Sydney, I have been enabled to compare microscopically quite a number of Chandidae with authentically named specimens. The following results will form a basis for further research although numerous species from Australia, New Guinea, and Oceania await more detailed treatment.

Some of these Chanda Perches are popular as aquarium pets, and the breeding of the Glass Fish *Ambassis* (= *Chanda*) *tala* Buch.-Ham. has recently been described, whilst in New South Wales and Queensland a popular aquarium species is *Ambassis agassizi* Steindachner (see Carter, The Aquarium (Philadelphia) i. 9, 1933, p. 234, and Ladiges, *ibid.* p. 306). The fact that some Chandidae are marine and others fluviatile indicates that, when the species are better known, their zoogeographical distribution will afford a fascinating subject for study.

Fishermen detest them, as Mr. L. Wilson writes (*in lit.* 1929) of "*Ambassis natalua*" from Port Darwin, where they are known as "Doody"—"Doody is a

(3) See p. 349.

pest, not even good bait. The fish mesh every time it is caught. They are more than plentiful, and are found with all classes of fish (mullet, sardine, etc.), and are always in large shoals. If one is not quick enough to notice the type of fish caught in the net, it takes the best part of an hour to clean your net again". Indeed, the present writer has collected series of specimens of another species by picking them out of the meshes of nets in northern New South Wales.

The Chandidae are of no commercial value, and Cantor states that they are merely used as manure in Malaya. Their saving grace seems to be their liking for mosquito-larvae as food, and several Australian species have been utilized in attempts to cope with the mosquito pest.

AUSTROCHANDA gen. nov.

Orthotype, *Pseudoambassis macleayi* Castelnau = *Austrochanda macleayi*.

Profile of head, excavated. No teeth on tongue. Supraorbital with but one spine posteriorly. Infraorbital, preorbital, and preoperculum serrated. Maxilla not dilated at its extremity. Not more than 10 dorsal and anal rays. Anterior dorsal and anal spines elongate. Recumbent dorsal spine not exposed. Body deep; lateral line incomplete. About a dozen predorsal scales. Caudal peduncle deep.

This new generic name is proposed for *Pseudoambassis* Castelnau (Proc. Linn. Soc. N.S. Wales iii, Sept., 1878, p. 43), preoccupied by *Pseudambassis* Bleeker (Arch. Néerl. Sci. Nat. xi, 2, 1876, p. 292; Genotype *Chanda lala* Buchanan-Hamilton). Bleeker's name is a synonym of *Chanda* Buchanan-Hamilton, as restricted by Fowler (Proc. Acad. Nat. Sci. Philad. 1905, p. 500), a genus having about fifteen anal rays.

AUSTROCHANDA MACLEAYI (Castelnau).

Fig. 6-7.

Pseudoambassis macleayi Castelnau, Proc. Linn. Soc. N.S. Wales iii, Sept. 1878, p. 43. Norman River, Gulf of Carpentaria. Types in Macleay Museum examined.

Pseudoambassis elongatus Castelnau, Proc. Linn. Soc. N.S. Wales iii, Sept. 1878, p. 44. Norman River, Gulf of Carpentaria. Types in Macleay Museum examined.

Ambassis elevatus Macleay, Proc. Linn. Soc. N.S. Wales v, Feb. 1881, p. 338. Endeavour River, Queensland. Types in Macleay Museum examined.

Pseudambassis pallidus De Vis, Proc. Linn. Soc. N.S. Wales ix, Aug. 19, 1884, p. 393. Queensland. Type in Queensland Museum examined and figured.

Pseudambassis convexus De Vis, Proc. Linn. Soc. N.S. Wales ix, Aug. 19, 1884, p. 394. Queensland. Types in Australian and Queensland Museums examined.

Ambassis mulleri Weber, Zool. Forsch. Austr. v, 1895, p. 263. Burnett River, Queensland. Not *A. mulleri* Klunzinger, Sitzb. Ak. Wiss. Wien. lxxx, 1, 1879, p. 346, pl. i, fig. 3, from Port Darwin.

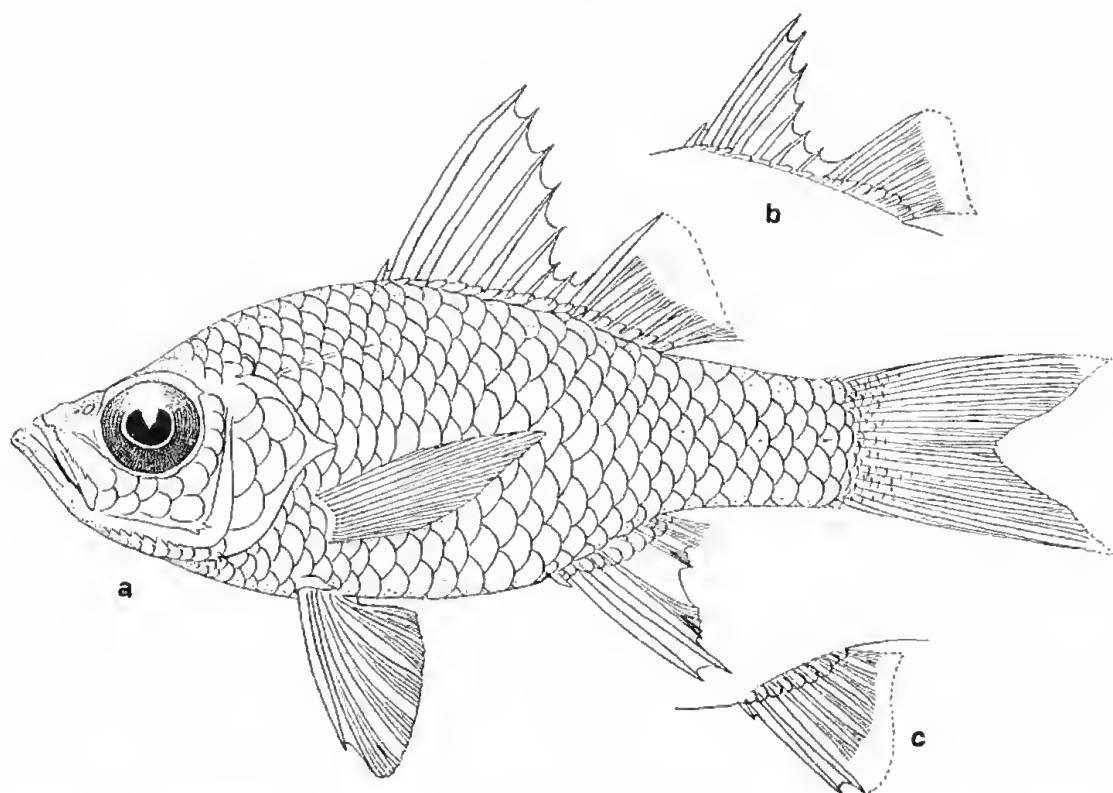


Fig. 6. *Austrochanda macleayi* (Cast.), juv. a, Lectotype of *Pseudoambassis elongatus* (Cast.); b and c, dorsal and anal fins of smaller type of *P. elongatus*, $\times 3$ (G. P. Whitley, det.).

There are three specimens of *macleayi* in the Macleay Museum from the Norman River, and the largest, 52 mm. in standard length, is selected as the lectotype of the species. The lateral line is incomplete and the scales are in from 26 to 28 transverse series. The orbital bones are more strongly serrated and the teeth more strongly developed in the type than in the smaller specimens, but all of them have D. vii/i, 10, A. iii/10 and dorsal membranes dusky.

The Macleay Museum has two small specimens of *Pseudoambassis elongatus* (Cast.) from the Norman River (fig. 6). These have D. vii-viii/i, 7; A. iii/4 (deformed)-7. A few tubes on the lateral line scales anteriorly. Scales in about

24 to 25 transverse series, 11, 11. The depth is about one-third of the standard length, but this is the slenderness natural in young specimens. A most careful comparison with *macleayi* makes it evident that the *elongatus* form is merely the young of the species.

Five types of *elevatus*, from the Endeavour River, are also in the Macleay Museum, and agree with those of *macleayi*. The formulae vary a little: D. vii/i, 9-10; A. iii/9-10; Sc. 24-26.

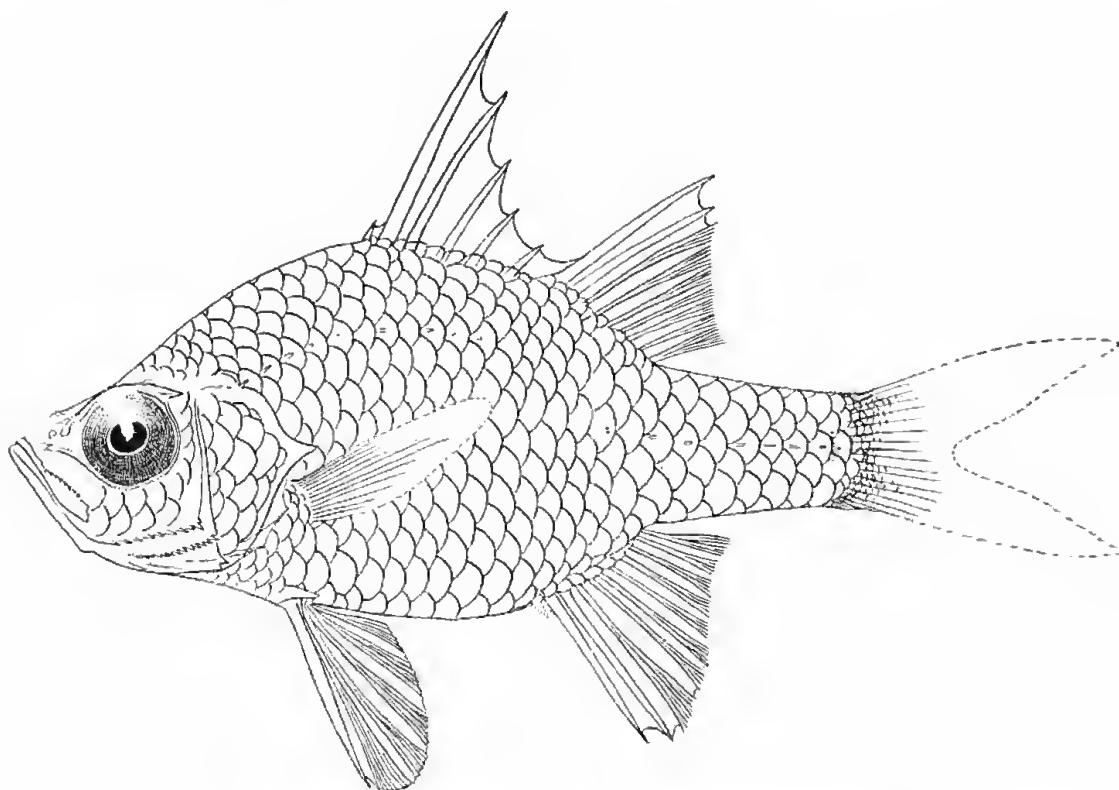


Fig. 7. *Anstrachonda macleayi* (Cast.). Type of *Pseudambassis pallidus* De Vis., $\times 1\frac{3}{4}$ (G. P. Whitley, del.).

The Queensland Museum has kindly forwarded a specimen which is obviously the type of *pallidus*, and which is here illustrated (fig. 7). It is 50 mm. in standard length. Head 19 mm., eye 6, interorbital 4, snout 3, depth of body 22 mm. Predorsal scales 12. The fin spines and rays appear to be abnormal, being D. vi/ii, 7; A. iii?/8; but it is not unusual for Chandidae, Gerridae, Leiognathidae, and like fishes to have a ray changed into a spine in some individuals.

The types of *P. convexus* De Vis have the upper preopercular ridge not serrated, as in the *elongatus* form, and eight dorsal rays, so *convexus* is apparently another synonym of this species. Thus, I regard *macleayi*, *elongatus*, *elevatus*, *pallidus*, and *convexus* as conspecific.

ACANTHOPERCA Castelnau, 1878.

Acanthoperca Castelnau, Proc. Linn. Soc. N.S. Wales, iii, Sept. 1878, p. 44. Haplotype *A. gulliveri* Castelnau.

Whitleyia Fowler, Bull. U.S. Nat. Mus. 100, x, 1930, pp. 2 and 148. Haplotype *Ambassis wolffi* Bleeker.

Whitleyina Fowler, *ibid.* p. vii, *Errata*.

This genus accommodates certain large forms of Chandidae with about 40 or more scales in the complete lateral line, about four to seven rows of cheek-scales, a large maxilla, and much enlarged dorsal and anal spines, the dorsal spines being higher than the soft dorsal fin. The type of *A. gulliveri* Castelnau, from the Norman River, Gulf of Carpentaria, is preserved in the Macleay Museum. It has D. vii/i, 11; A. iii/9; 1 lat. 38 to hypural, and the procumbent dorsal spine present but concealed. It is evidently conspecific with *Ambassis gigas* Ramsay and Ogilby (Proc. Linn. Soc. N.S. Wales (2) i, 1886, p. 9), the holotype of which, from the Strickland River, New Guinea, is in the Australian Museum. This specimen has 12 dorsal and anal rays, but otherwise agrees in detail with the excellent description and figure of the species given by Weber and Beaufort (Fish. Indo-Austr. Archip. v, 1929, p. 403, fig. 97; see also Weber, Nova Guinea ix, 1913, p. 576, fig. 31).

Apparently, *Whitleyia* is a synonym (or at most a subgenus) of *Acanthoperca*.

NEGAMBASSIS gen. nov.

Orthotype, *Tetracentrum apogonoides* Macleay.

A genus of freshwater Chandidae having four anal spines. Both the dorsal and anal spines are very strong. Procumbent dorsal spine concealed. The head is excavated above, and has several naked areas. Supraorbital forming a spineless ridge. Infraorbital, preorbital, preopercle, and interopercle strongly serrated. Jaws and fine teeth, enlarged anteriorly in upper jaw. Lateral line complete, running over about thirty scales. Size fairly large.

Negambassis replaces *Tetracentrum* Macleay, proce. in Insecta by Brauer, 1865.

NEGAMBASSIS APOGONOIDES (Macleay).

Fig. 8.

Tetracentrum apogonoides Macleay, Proc. Linn. Soc. N.S. Wales viii, July 17, 1883, p. 256. Goldie River, New Guinea. Cotypes in Aust. Mus. seen. *Id.* Fowler, Mem. Bish. Mus. x, 1928, p. 167. *Id.* Weber and Beaufort, Fish. Indo-Austr. Archip. v, 1929, p. 425.

This species is now figured for the first time from the lectotype, the largest of a series of cotypes in the Australian Museum. This specimen is 125 mm. in standard length or about six inches overall. Although superficially like an Apogonid fish, this species is obviously derived from an *Ambassis*-like form. It is rather like *Parambassis* Bleeker, but the four anal spines (constant in all the

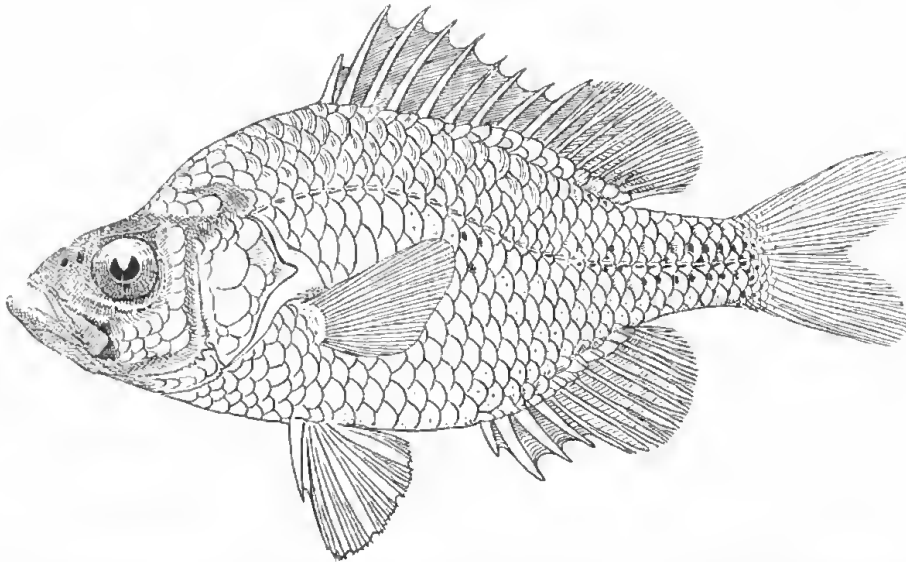


Fig. 8. *Neqambassis apogonoides* (Macleay). Lectotype, $\times \frac{2}{3}$ (G. P. Whitley, del.).

cotypes), the larger scales, and the naked patches on the head serve to distinguish it. There are three or four rows of scales above the lateral line and three rows of cheek-scales. The coloration is now obscure, but the specimens were apparently conspicuously spotted in life.

BLANDOWSKIELLA Iredale and Whitley, 1932.

Blandowskiella Iredale and Whitley, Viet. Nat. xlix, Aug. 8, 1932, p. 95. Orthotype *Pseudambassis castelnaui* Macleay.

Profile of head not cut by supraorbital, which is not serrated. Preoperculum and preorbital serrated, but other bones of head entire. Maxilla short. About eight dorsal and anal rays. Dorsal and anal spines not very strong. Body compressed, not very deep. Lateral line practically obsolete. Inhabiting freshwater.

BLANDOWSKIELLA CASTELNAUI (Macleay).

Fig. 9.

Pseudambassis castelnaui Macleay, Proc. Linn. Soc. N.S. Wales v, Feb. 1881, p. 339. Murrumbidgee River, N.S. Wales.

A specimen from the Narrandera district, New South Wales, is here figured. This species was discovered by William von Blandowski in Victoria, but Macleay later published a name for it. In recounting the deeds of Blandowski, Iredale

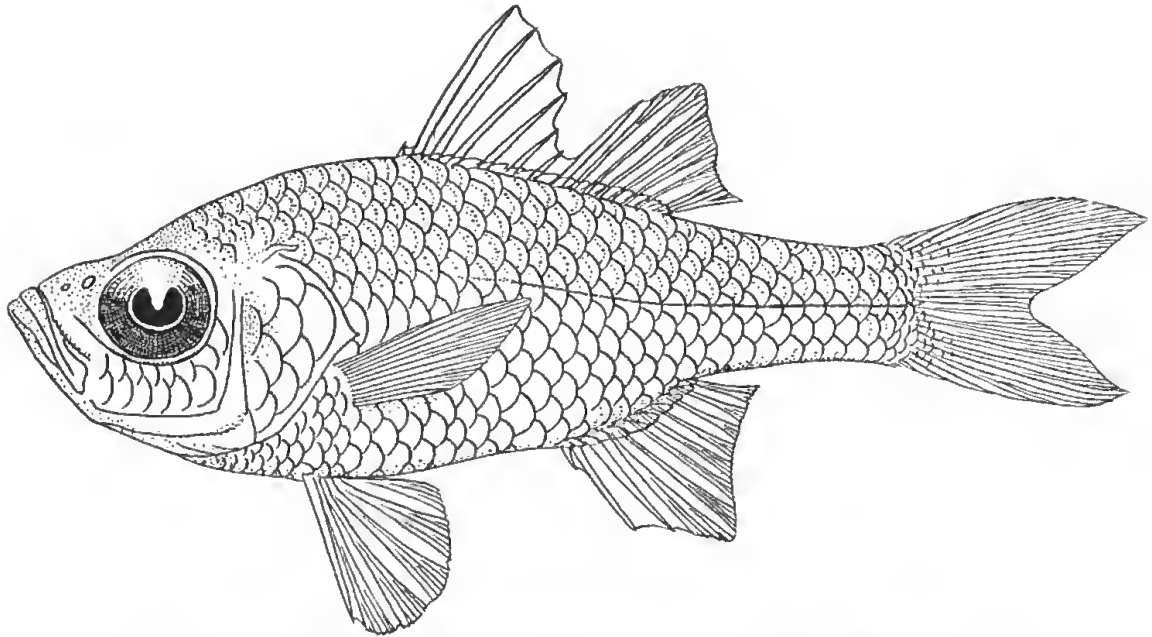


Fig. 9. *Blandowskiella castelnaui* (Macleay). $\times 2\frac{1}{2}$ (G. P. Whitley, del.).

and Whitley provided a new generic name for this attractive little species. I have also seen Murray River (Victoria) specimens in the National Museum, Melbourne.

AMBASSIS CHIV. and Val., 1828, *sensu lato*.

AMBASSIS PAPUENSIS Alleyne and Macleay.

Fig. 10.

Ambassis papuensis Alleyne and Macleay, Proc. Linn. Soc. N.S. Wales i, Feb. 1877, p. 266, pl. v, fig. 4. Hall Sound, New Guinea. Types in Macleay Museum examined.

There are two co-types of this species in the Macleay Museum, 44 to 47.5 mm. in standard length; the larger specimen is hereby designated the lectotype, and figured.

D. vii/i, 9; A. iii/9; L. lat. $12 + 12 = 24$. L. tr. 2/1/7-8.

Eye, 6.5 mm., head 16, depth of body 19, second dorsal spine 12 mm. in larger specimen.

General characters as in *A. telkara* but the nuchal ridge is not serrated; there is only one row of scales on the cheek, and about ten predorsal scales. The second anal spine of *papuensis* is much shorter than the third, and the posterior

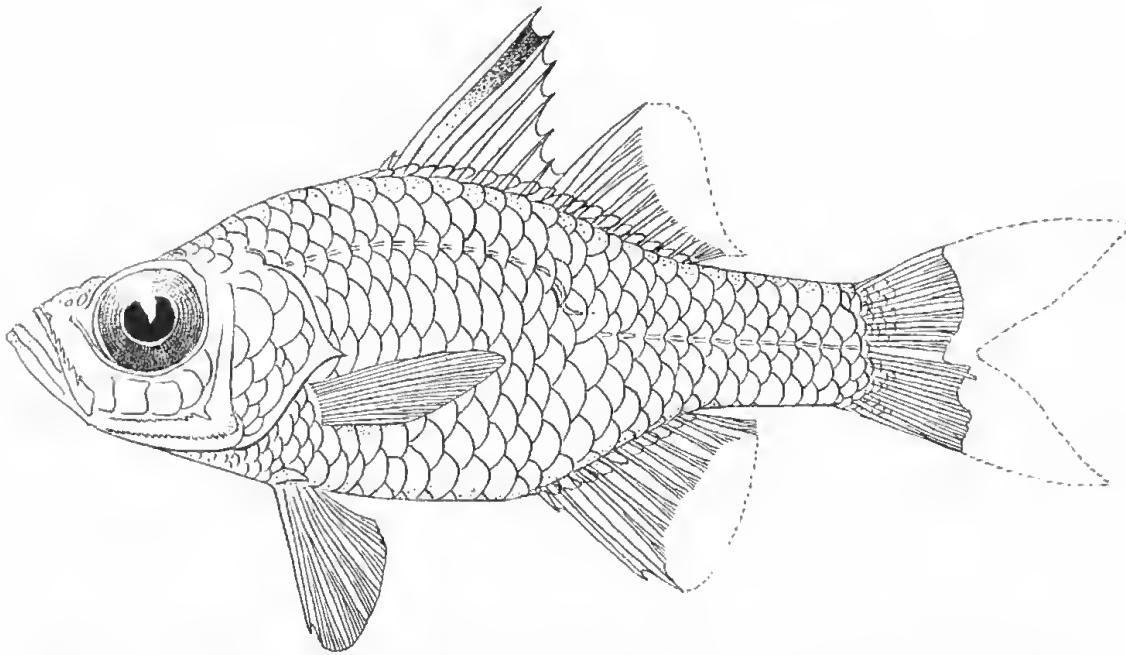


Fig. 10. *Ambassis papuensis* Alleyne & Macleay, lectotype, $\times 2$ (G. F. Whitley, del.).

margins of the preoperculum and interoperculum are not denticulated. Tongue toothless.

Probably both *A. telkara* and *A. papuensis* are subgenerically distinct from the true *Ambassis ambassis* (Lacépède) type of the genus.

AMBASSIS AGASSIZII Steindachner.

Ambassis agassizii Steindachner, Sitzb. Ak. Wiss. Wien Iv, I, 1867, p. 9. Fitzroy R., Rockhampton. *Id.* Günther, Ann. Mag. Nat. Hist. (3) xx, 1867, p. 57. Clarence R., N.S.W.

Chanda agassizii Waite, Mem. N.S.W. Nat. Club, i, 1904, p. 29. N.S. Wales.

Priopsis nigripinnis Ogilby, Proc. Roy. Soc. Qld, xxiii, Nov. 1910, p. 13. Creeks at Kilcoy, South Queensland.

A diminutive species, up to $2\frac{1}{2}$ inches long, from the rivers of southern Queensland and northern New South Wales. *Priopsis nigripinnis* Ogilby (not *Pseudambassis nigripinnis* De Vis) is evidently a synonym of this species as, although Ogilby's types have been lost, his description agrees well with that of Steindachner.

AMBASSIS NIGRIPINNIS (De Vis).

Pseudambassis nigripinnis De Vis, Proc. Linn. Soc. N.S.Wales ix, Aug. 1884, p. 393. Brisbane River, Queensland. (Cotypes in Austr. Mus. seen.)

Priopis olivaceus Ogilby, Proc. Roy. Soc. Qld. xxiii, Nov. 1910, p. 11. Creeks and waterholes around Brisbane.

One or two tubes on lateral line. *Sc. circa* 25. Two rows of cheek-scales, sub-orbital serrated; upper preopercular angle with two spines, otherwise not serrated.

Ogilby's species, *olivaceus*, is apparently a synonym of *nigripinnis* De Vis. Ogilby also described a new species under the name *nigripinnis*, but this does not require a new name as it is evidently a synonym of *Ambassis agassizii* Steindachner.

PRIOPIDICHTHYS gen. nov.

Orthotype *Pseudambassis ramsayi* Macleay = *Priopidichthys marianus* (Günther),

Supraorbital with several spines posteriorly. Preorbital and lower limbs of preoperculum serrated, infraorbital crenulate; other bones of head smooth. Teeth on jaws, vomer, palatines, and tongue. Maxilla moderate. Six or seven dorsal spines and ten to eleven dorsal and anal rays. Lateral line well developed, but interrupted.

PRIOPIDICHTHYS MARIANUS (Günther).

Ambassis marianus Günther, Rept. Voy. Chall., Zool. i, 6, 1880, p. 32. Tiaro, Mary River, Queensland ("Challenger" Exped.).

Pseudambassis ramsayi Macleay, Proc. Linn. Soc. N.S. Wales, v, 1881, p. 340. Port Jackson. Type in Macleay Mus. seen.

Ambassis commersonii Ogilby, Cat. Fish. N.S. Wales, 1886, p. 14. Richmond River, N.S.W. Not *A. commersonii* Cuv. and Val., 1828, from Bourbon, etc. *Chanda burnensis* Waite, Mem. N.S.W. Nat. Club, i, 1904, p. 29 (N.S.W.). Not *Ambassis burnensis* Bleeker Nat. Tydschr. Ned. Ind. xi, 1856, p. 396, from East Indies.

Priopis ramsayi McCulloch, Zool. Res. Endeav. i, 1911, p. 57, pl. xvi, fig. 3 (ref. and synon.).

I am unable to separate *ramsayi* from *marianus* as a distinct species. The lateral line of Nerang Creek (Queensland) specimens caught by Ogilby and Tosh in one haul of the net varied from 9-14 + 0-11. *Sc.* 2/28-30/8 (*vide* Ogilby MS.). The 10 or 11 dorsal and anal rays are useful features for diagnosing this species, which is marine or estuarine in Eastern Australia.

VELAMBASSIS gen. nov.

Orthotype *Pseudambassis jacksoniensis* Macleay (Proc. Linn. Soc. N.S. Wales v. Feb. 1881, p. 340. Port Jackson) = *Velambassis jacksoniensis*.

Form elongate, the depth more than 3 in standard length. Supraorbital with a spine posteriorly, the preorbital and infraorbital denticulated and the preopercular and interopercular margins serrated. Eye slightly shorter than

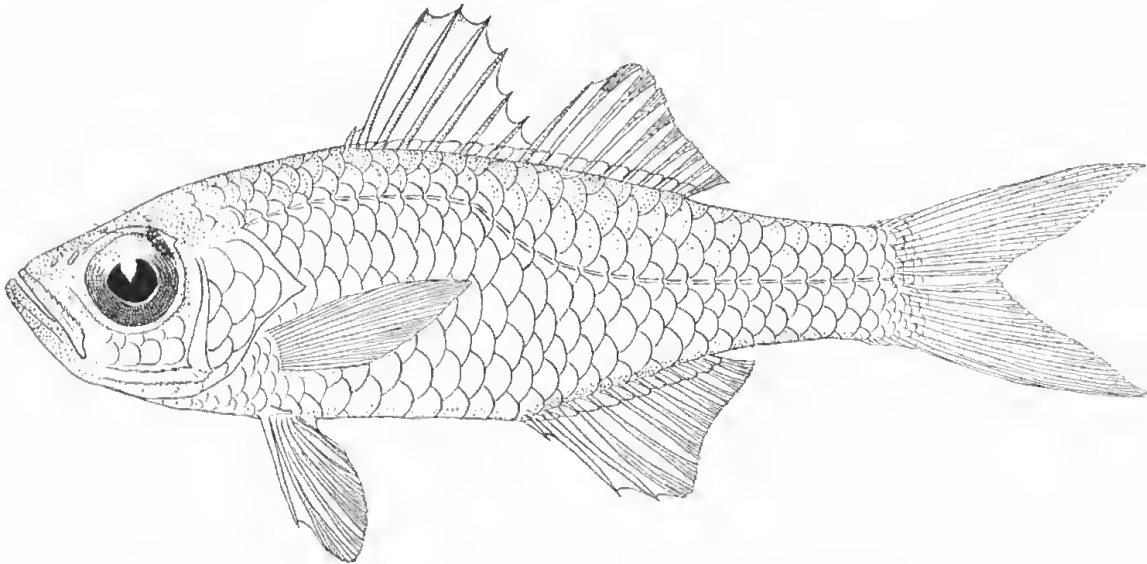


Fig. 11. *Velambassis jacksoniensis* (Macleay). $\times 2$ (G. P. Whitley, del.).

postorbital part of head. Maxillary moderate, just reaching to below anterior portion of eye. Small teeth on jaws and palate; none on tongue. Two rows of cheek scales. Lateral line complete, with about 27 or 28 tubed scales. About 10 to 12 predorsal scales. Proeminent dorsal spine concealed. D. vii/i, 9-10; A. iii, 9. Third dorsal spine longest and much longer than the longest (third) anal spine. The dorsal spines are weaker than is usual in the Chandidae. Back and fins speckled. A specimen of *V. jacksoniensis*, 40 mm. in standard length, is here illustrated (fig. 11). It is one of a series collected at Shellharbour, N.S. Wales, by Mr. P. A. McNeill, Austr. Museum. regd. No. 1A. 6063.